

Inductor Series Value Calculator

Combines two or three uncoupled series inductors into an ideal equivalent inductance while leaving coupling, saturation, and rating checks separate.

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<https://www.elecatrrix.com/circuits-components/inductor-series-value-calculator/>

Inputs

Input	Value	Unit
Inductance 1	10	mH
Inductance 2	10	mH
Inductance 3 (optional)	N/A	mH

Results

Result	Value	Unit
Equivalent inductance	20	mH

Calculation details

Detail	Value	Unit
Calculation basis	Series inductances add when mutual coupling is excluded.	
Boundary	Ideal uncoupled-inductor arithmetic only; verify mutual coupling, saturation, winding resistance, current rating, and frequency behavior.	

Formulas

$$L_{eq} = L_1 + L_2 + L_3$$

L_3 is omitted when its input is 0

Warnings and limitations

This is ideal uncoupled-inductor arithmetic. Verify mutual coupling, saturation, winding resistance, current rating, core behavior, and frequency before applying it to hardware.